GCN CIRCULAR 23517: INTEGRAL observations of the events in the GWTC-1 catalog

Savchenko, V.; Ferrigno, C.; Bozzo, E.; Kuulkers, E.; Sanchez, C.; Mereghetti, S.; Rodi, J. C.; Bazzano, A.; Ubertini, P.; Natalucci, L.

Total number of authors:
22

Publication date:
2018

Document Version
Publisher's PDF, also known as Version of record

TITLE: GCN CIRCULAR
NUMBER: 23517
SUBJECT: INTEGRAL observations of the events in the GWTC-1 catalog
DATE: 18/12/07 11:09:45 GMT
FROM: Volodymyr Savchenko at ISDC,U of Geneve <savchenk@in2p3.fr>

V. Savchenko, C. Ferrigno, E. Bozzo (ISDC, University of Geneva, CH)
E. Kuulkers (ESTEC/ESA, The Netherlands)
C. Sanchez (ESAC/ESA, Madrid)
S. Mereghetti (INAF IASF-Milano, Italy)
J. Rodi, A. Bazzano, P. Ubertini, L. Natalucci (IAPS-Roma)
J. Chenevez, S. Brandt (DTU, Denmark)
R. Diehl, A. von Kienlin (MPE, Germany)
D. Gotz, Ph. Laurent (DRF/Irfu/DAp Saclay/CEA)
L. Hanlon, A. Martin-Carrillo (UCD, Ireland)
J.-P. Roques, E. Jourdain (IRAP, France)
A. Lutovinov, R. Sunyaev (IKI, Russia)

Recently, LIGO/Virgo announced the catalog of gravitational wave events during the first two observing runs O1 and O2 [GWTC-1, arXiv:1811.12907]: 11 high-confidence and 14 marginal events.

INTEGRAL observations are available for 20 out of the 25 events from the complete GWTC-1 sample, consistent with the INTEGRAL duty cycle of about 85%.
In particular, the observations are available for 7 out of 11 (64%) of the high-confidence gravitational wave events and 13 out of 14 (93%) of the marginal ones.

For each of the observed events, INTEGRAL was sensitive to the entire LIGO/Virgo localization region. Our preliminary search did not reveal any new significant impulsive gamma-ray counterparts, setting typical upper limits on the 1-s peak flux ranging from 1e-7 to 1e-6 erg/cm2/s in 75-2000 keV energy range.

Detailed analysis and upper limits will be reported in a forthcoming paper.